Volunteer Lake Assessment Program Individual Lake Reports
LYFORD POND, CANTERBURY, NH

MORPHOMETRIC DATA

Watershed Area (Ac.):	351	Max. Depth (m):	2.7	Flushing Rate (yr¹)	4.3
Surface Area (Ac.):	26	Mean Depth (m):	1.4	P Retention Coef:	0.63
Shore Length (m):	1,450	Volume (m³):	144,000	Elevation (ft):	814

TROPHIC CLASSIFICATION

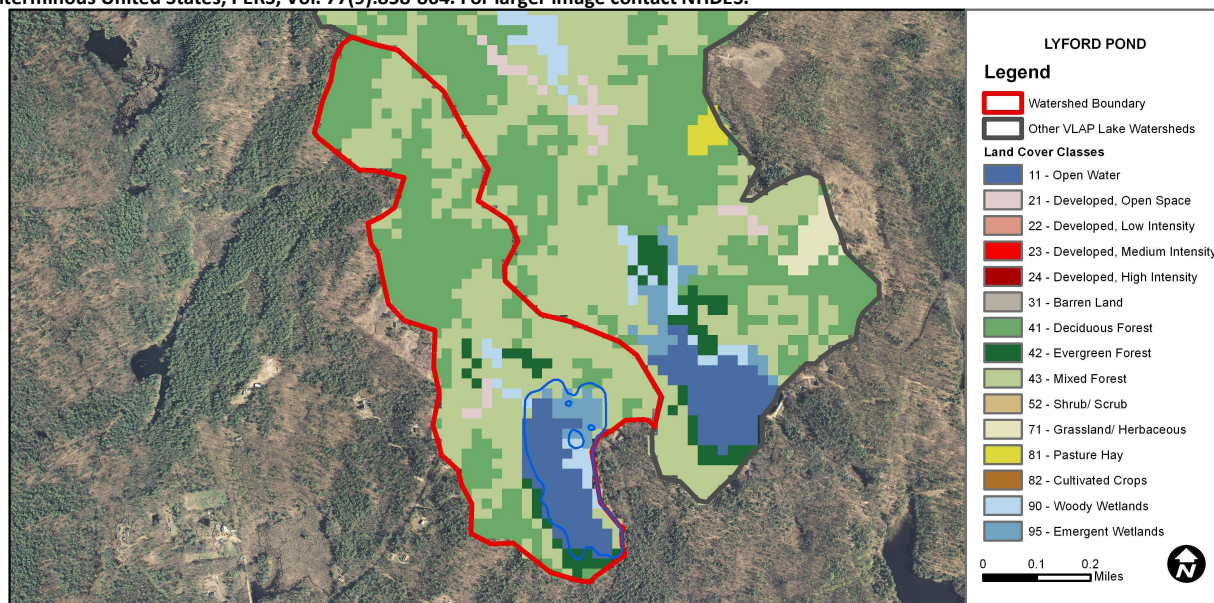| Year	Trophic class
1985	OLIGOTROPHIC
1997	MESOTROPHIC

KNOWN EXOTIC SPECIES

The Waterbody Report Card tables are generated from the 2012 305(b) report on the status of N.H. waters, and are based on data collected from 2001-2011.

Designated Use	Parameter	Category	Comments
Aquatic Life	Phosphorus (Total)	Marginally Good	The calculated median is from 5 or more samples and is < indicator and > 1/2 indicator and the chlorophyll a indicator is okay.
	Oxygen, Dissolved	Likely Good	There are < 10 samples with 0 exceedances of criteria. More data needed.
	Dissolved oxygen satura	Slightly Bad	There are >10% of samples (minimum of 2), exceeding criteria.
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	Chlorophyll-a	Marginally Good	The calculated median is from 5 or more samples and is < indicator and > 1/2 indicator.
Primary Contact Recreation	Escherichia coli	Good	Where there are no geometric means, all bacteria samples are < 75% of the geometric mean. Where there are geometric means all single bacteria samples are < the SSMC and all geometric means are < geometric mean criteria.
	Chlorophyll-a	Likely Good	There are < 10 samples with 0 exceedances of indicator. More data needed.

BEACH PRIMARY CONTACT ASSESSMENT STATUS

WATERSHED LAND USE SUMMARY

Fry, J., Xian, G., Jin, S., Dewitz, J., Homer, C., Yang, L., Barnes, C., Herold, N., and Wickham, J., 2011. Completion of the 2006 National Land Cover Database for the Conterminous United States, PERS, Vol. 77(9):858-864. For larger image contact NHDES.
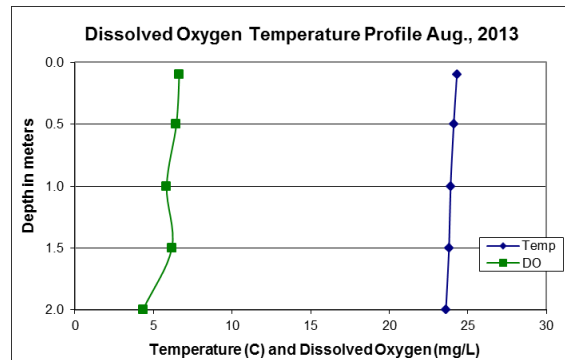

LYFORD POND

Legend

- ▭ Watershed Boundary
- ▭ Other VLAP Lake Watersheds

Land Cover Classes
- 11 - Open Water
- 21 - Developed, Open Space
- 22 - Developed, Low Intensity
- 23 - Developed, Medium Intensity
- 24 - Developed, High Intensity
- 31 - Barren Land
- 41 - Deciduous Forest
- 42 - Evergreen Forest
- 43 - Mixed Forest
- 52 - Shrub/ Scrub
- 71 - Grassland/ Herbaceous
- 81 - Pasture Hay
- 82 - Cultivated Crops
- 90 - Woody Wetlands
- 95 - Emergent Wetlands

0   0.1   0.2 Miles

OBSERVATIONS AND RECOMMENDATIONS (*Refer to Table 1 and Historical Deep Spot Data Graphics*)

🌢 **CHLOROPHYLL-A:** Chlorophyll levels were slightly above average for most NH lakes. Visual inspection of historical data indicates chlorophyll levels vary annually.

🌢 **CONDUCTIVITY/CHLORIDE:** Epilimnetic (deep spot) conductivity was approximately equal to the NH lake median. Visual inspection of historical data indicates stable epilimnetic conductivity.

🌢 **TOTAL PHOSPHORUS:** Epilimnetic phosphorus was approximately equal to the NH lake median. Visual inspection of historical data indicates highly variable phosphorus levels.

🌢 **TRANSPARENCY:** Transparency was good and the Secchi disk was visible on the pond bottom. Visual inspection of historical data indicates slightly variable transparency.

🌢 **TURBIDITY:** Epilimentic turbidity was slightly above average potentially due to the above average algal growth.

🌢 **PH:** Epilimnetic pH was less than the desirable range 6.5 – 8.0 units.

🌢 **DISSOLVED OXYGEN:** Dissolved oxygen levels were stable and sufficient to support aquatic life.

🌢 **RECOMMENDED ACTIONS:** Increase monitoring frequency to three times per summer, typically June, July and August, to better assess seasonal and historical trends. Contact the VLAP Coordinator in early spring to schedule a biologist visit.

Dissolved Oxygen Temperature Profile Aug., 2013

	Table 1. 2013 Average Water Quality Data for LYFORD POND							
	Alk.	Chlor-a	Cond.	Total P	Trans.		Turb.	pH
Station Name	mg/l	ug/l	uS/cm	ug/l	m		ntu	
					NVS	VS		
Epilimnion	5.80	5.33	46.6	12	2.00	2.55	1.54	6.36

NH Median Values: Median values for specific parameters generated from historic lake monitoring data.
Alkalinity: 4.9 mg/L
Chlorophyll-a: 4.58 mg/m³
Conductivity: 40.0 uS/cm
Chloride: 4 mg/L
Total Phosphorus: 12 ug/L
Transparency: 3.2 m
pH: 6.6

NH Water Quality Standards: Numeric criteria for specific parameters. Results exceeding criteria are considered a water quality violation.
Chloride: < 230 mg/L (chronic)
E. coli: > 88 cts/100 mL – public beach
E. coli: > 406 cts/100 mL – surface waters
Turbidity: > 10 NTU above natural level
pH: 6.5-8.0 (unless naturally occurring)

HISTORICAL WATER QUALITY TREND ANALYSIS

Parameter	Trend	Explanation	Parameter	Trend	Explanation
pH	N/A	Ten consecutive years of data necessary.	Chlorophyll-a	N/A	Ten consecutive years of data necessary.
Conductivity	N/A	Ten consecutive years of data necessary.	Transparency	N/A	Ten consecutive years of data necessary.
			Phosphorus (epilimnion)	N/A	Ten consecutive years of data necessary.

Historical Trend Epilimnetic Conductivity and pH

Historical Deep Spot Chlorophyll-a, Epilimnetic Total Phosphorus & Transparency Data